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NOTES ON GEOGRAPHIC DISTRIBUTION

Diptera, Muscidae, *Mydaea plaumanni* Snyder, 1941: First record from Argentina

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ABSTRACT: *Mydaea* is a cosmopolitan genus of Muscidae (Diptera) poorly studied in the Neotropical region. In Argentina, only two endemic species, *M. latomensis* Snyder, 1957 and *M. sexpunctata* (Wulp, 1883) are known. This work provides the first country record for *M. plaumanni* Snyder, 1941, extending the known range of the species.

Muscidae is a large family of Calyptratae Diptera found in all biogeographic regions. This family possesses high species richness in the Neotropical region, being incipient its knowledge in Argentina (Carvalho *et al.* 2005; Nihei and Domínguez 2008). The species of Muscidae occupy different environments and the adults show a strong dispersion potential. The adults of this family have different habits, such as: saprophagous, coprophagous, blood-sucking, etc. Some species have a prominent epidemiological role, acting as mechanical vectors of different pathogenic agents (Greenberg 1971), while other are forensic indicators (Oliva 1997). In Argentina, the taxonomic studies of adults of this family are scarce (Shannon and Del Ponte 1926; 1928; Malloch 1934; García 1952; Couri *et al.* 2009). Currently 170 species are recorded, of which 60 are endemic.

The cosmopolitan genus *Mydaea* Robineau-Desvoidy, 1830 is poorly studied in the Neotropical region and a large number of new species wait to be described (Carvalho 2002). The monophyly and systematic position of this genus is not corroborated. According to Vockeroth (1972) *Mydaea* and *Myospila* Rondani, 1856 are closely related, especially based on morphological characters of the ovipositor. Vockeroth (1996) synonymized *Scenetes* Malloch, 1936 with *Mydaea*, specially based on the structure of the ovipositor. Carvalho (2002) did not recognize this synonymy, and considered the need of a complete revision of the genus to better define the phylogenetic relationships among species groups. In Argentina, this genus was previously represented by two endemic species: *Mydaea sexpunctata* (Wulp, 1883), referred to "Argentina" (location not specified); and *Mydaea latomensis* Snyder 1957 captured in "Quebrada La Toma", province of Tucumán.

Mydaea plaumanni Snyder, 1941 (Figure 1) was recorded from Brazil, Mexico and Paraguay (Carvalho *et al.* 2005). This species was originally described by Snyder (1941) on the basis of three female specimens and subsequently presented the description of male (Snyder 1949). In addition, Carvalho and Lopes (1985) made a redescription of the species, providing new characters of the genitalia.

Specimens identification was ensured using the key of Neotropical Muscidae provided by Carvalho (2002), followed by the detailed examination of the specimens compared to original description and redescription (Snyder 1941; Snyder 1949; Carvalho and Lopes 1985). On the other hand, the specimens obtained were compared to reference material originally determined by F. Snyder, deposited in "Fundación Miguel Lillo" (FML). All collected specimens were deposited in the collection of Departamento Vectores, ANLIS "Dr. Carlos G. Malbrán" (ANLIS, DV). Herein we report the first record of *M. plaumanni* for Argentina.

FIGURE 1. Fronto-lateral view of *Mydaea plaumanni*.

Table 1. Specimen data of *Mydaea plaumanni* collected in Argentina.

SPECIMENS	DATE	LOCATION (locality, province)	SOURCE	INSTITUTION
5 ♂ / 2 ♀	29-IV-2007	Burzaco, Buenos Aires	Mulieri leg.	ANLIS, DV
2 ♀ / 2 ♀	19-VIII-2007	Capital Federal, Buenos Aires	Patitucci leg.	ANLIS, DV
1 ♀	II-1982	Villa Elisa, La Plata, Buenos Aires	Mariluis leg.	ANLIS, DV
2 ♀	VII-1965	Iguazú, Misiones	Hepper leg.	ANLIS, DV
2 ♀	XII-1986	Camino de Cornisa (1643-1800 m), Salta	Mariluis leg.	ANLIS, DV
3 ♀	21-XII-1950	Quebrada la Toma, Tucumán	Golbach leg.	FML
1 ♀	17-I-1948	V. Padre Monti, Burruyacu, Tucumán	Golbach leg.	FML

Mydaea plaumanni was recorded from Parana, Santa Catarina and Rio Grande do Sul, southern Brazil (Carvalho *et al.* 1984; Rodríguez-Fernández *et al.* 2006; Krüger *et al.* 2010) and Villarrica, Paraguay (Snyder 1949). Our current finding expand the geographical distribution of *M. plaumanni*, increasing the southern extreme of its distribution in South America, reaching 34°49'28" S, 58°24'15" W corresponding to the location of Burzaco, Buenos Aires (Figure 2). In Argentina, this species was registered from the provinces of Misiones, Tucumán and Salta (Table 1). In addition, the records of *M. plaumanni* from the provinces of Tucumán and Salta represent the westernmost registers in South America. This species was collected in Buenos Aires as part of a comprehensive work on Muscidae assemblages along an urban-rural gradient. Moreover, *M. plaumanni* was obtained in shaded sites of suburban environments during the autumn-winter period, and was attracted by dog faeces.

These new records increase the number of species of Muscidae in Argentina to 171.

Figure 2. Map of South America showing the distribution of *Mydaea plaumanni*. Black dots: literature records; red dots: new records.

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Literature Cited

Carvalho, C.J.B. J.R. Almeida and C.B. de Jesús. 1984. Dípteros sinantrópicos de Curitiba e arredores (Paraná, Brasil). I. Muscidae. *Revista Brasileira de Entomologia* 28: 551-560.

Carvalho, C.J.B., M.S. Couri, A.C. Pont, D. Pamplona, and S.M. Lopes. 2005. A Catalogue of the Muscidae (Diptera) of the Neotropical Region. *Zootaxa* 860: 282 pp.

Carvalho, C.J.B. and S.M. Lopes. 1985. Redescrição de *Mydaea plaumanni* Snyder, 1941 (Diptera, Muscidae, Mydaeinae) do Brasil. *Revista Brasileira de Biologia* 45: 51-53.

Couri, M.S., L.R. Antoniazzi, P. Beldomenico and M. Quiroga. 2009. Argentine *Philornis* Meinert species (Diptera: Muscidae) with synonymic notes. *Zootaxa* 2261: 52-62.

García, M. 1952. Las especies argentinas del género *Philornis* Mein., com descripción de especies nuevas (Dip. Anthom.). *Revista de la Sociedad Entomológica Argentina* 15: 277-293.

Greenberg, B. 1971. *Flies and Diseases, vol. 1: Ecology, classification and biotic associations*. Princenton: Princeton University Press. 856 p.

Krüger, R.F., C.J.B. Carvalho and. P.B. Ribeiro. 2010. Assembly Rules in Muscid Fly Assemblages in the Grasslands Biome of Southern Brazil. *Neotropical Entomology* 39(3): 345-353.

Malloch, J.R. 1934. Muscidae. *Diptera of Patagonia and South Chile* 7 (2): 171-346.

Nihei, S.S. and M.C. Domínguez. 2008. Muscidae; p 319-328 *In* L.E. Claps, G. Debandi and S. Roig-Juñent (ed.). *Biodiversidad de Artrópodos Argentinos*, vol.2. Mendoza: Sociedad Entomológica Argentina.

Oliva, A. 1997. Insectos de interés forense de Buenos Aires (Argentina). Primera lista ilustrtada y datos bionómicos. *Revista del Museo Argentino de Ciencias Naturales "Bernardino Rivadavia"* 7: 1-59.

Rodríguez-Fernández, J.I., C.J.B. Carvalho and M.O. Moura. 2006. Estrutura de assembléias de Muscidae (Diptera) no Paraná: uma análise por modelos nulos. *Revista Brasileira de Entomologia* 50(1): 93-100.

Shannon, R.C. and E. Del Ponte. 1926. Sinopsis parcial de los Muscoideos Argentinos. *Revista del Instituto Bacteriologico* 4: 549-590.

Shannon, R.C. and E. Del Ponte. 1928. Sinopsis parcial de los Muscoideos Argentinos (Addenda et Corrigenda). *Revista del Instituto Bacteriologico* 5: 141-147.

Snyder, F.M. 1941. Contribution to a revision of Neotropical Mydaeini (Diptera: Muscidae). *American Museum Novitates* 1134: 1-22

Snyder, F.M. 1949. Notes and descriptions of some Phaoniinae (Diptera, Muscidae). *American Museum Novitates* 1402: 1-25.

Vockeroth, J.R. 1972. A review of the world genera of Mydaeinae, with a revision of the species of New Guinea and Oceania (Diptera: Muscidae). *Pacific Insects Monographs* 29: 1-134.

Vockeroth, J.R. 1996. Key to genera of Muscidae (Diptera) of Mexico, Central America, and the West Indies. *Memoirs of the Entomological Society of Washington* 18: 280-288.

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